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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,486	08/18/2003	Mohamed Emam Labib	14605.1USD3	6002

23552 7590 07/12/2005

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EXAMINER

STINSON, FRANKIE L

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/643,486

Applicant(s)

LABIB ET AL.

Examiner

FRANKIE L. STINSON

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/2/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 1746

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 19-21 and 35 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Grubb (U. S. Pat. No. 3,467,314).

Re claim 19, Grubb is cited disclosing an apparatus for removing debris from objects comprising:

a source of gas under pressure (as at 56, 54);

a source of aqueous cleaning solution (as at 22) including one or more surfactants;

a mixing chamber (82) for mixing said gas under pressure and said aqueous cleaning solution

at a ratio so as to form a turbulent two phase flow of gas and liquid (see abstract)

having a velocity sufficient to loosen the debris from said object and flush them away (inherent); and

a line (12) for delivering said turbulent two phase flow of gas and liquid to the object. In regard to the limitation of cleaning biofilm from a waterline, this is merely a statement of intended use and has been given no patentable weight. See **MPEP 2114:**

APPARATUS CLAIMS MUST BE STRUCTURALLY DISTINGUISHABLE FROM THE PRIOR ART

Art Unit: 1746

>While features of an apparatus may be recited either structurally or functionally, claims< directed to >an< apparatus must be distinguished from the prior art in terms of structure rather than function. >In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board's finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference); see also In re Swinehart, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971);< In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original).

MANNER OF OPERATING THE DEVICE DOES NOT DIFFERENTIATE**APPARATUS CLAIM FROM THE PRIOR ART**

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987) (The preamble of claim 1 recited that the apparatus was "for mixing flowing developer material" and the body of the claim recited "means for

Art Unit: 1746

mixing ..., said mixing means being stationary and completely submerged in the developer material". The claim was rejected over a reference which taught all the structural limitations of the claim for the intended use of mixing flowing developer. However, the mixer was only partially submerged in the developer material. The Board held that the amount of submersion is immaterial to the structure of the mixer and thus the claim was properly rejected.). Re claim 20, Grubb discloses the line for delivering gas under pressure to the mixing chamber. Re claim 21, Grubb discloses the line for delivering the cleaning solution to the mixing chamber. Re claim 35, Grubb discloses the pressure (see col. 5, line 5).

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grubb in view of Michelsen et al. (U. S. Pat. No. 5,314,644).

Claims 22 and 23 define over Grubb only in the recitation of the specific range of the Reynolds number. Although Grubb is silent with respect to any specific Reynolds number, it is believed the same would have to be at least over 4000 since this is approximately, the number at which turbulence begins. And Grubb desires an "extremely and highly turbulent" flow (abstract). Nonetheless, Michelsen is cited disclosing in a two phase flow of a gas and liquid/surfactant, where there is employed a

Art Unit: 1746

Reynolds number of 4000-10000 (col. 6, line 20) . It therefore would have been obvious to one having ordinary skill in the art to modify the device of Grubb, to employ a Reynolds as taught by Michelsen, since Grubb desires a extremely and highly turbulent flow, and since Michelsen disclose that at this range the turbulence is desirable for cleaning.

5. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grubb in view of WO 93/17800.

Claim 24 defines over Grubb only in the recitation of the gas to liquid ratio being 50:1. While Grubb is silent with respect the ratio as claimed, Grubb discloses that the solution is controlled by a valve (26). Thusly, it is deemed that, if desired, the 50:1 ratio is inherently taught by Grubb. Nonetheless, WO'800 is cited disclosing that it is old and well known to and provide variable ratios of the gas to liquid in a two phase flow at a predetermined constant or variable relationship. WO'800 specifically teaches the ratio may be "equal, leaner or richer solvent to air" (see WO'800, page 7, lines 17-19). It therefore would have been obvious to one having ordinary skill in the art to modify the inherent ratio in Grubb, to be as taught by WO'800, since WO'800 teaches leaner the solvent/liquid to air. The specific 50:1 ratio is easily obtainable through routine experimentation.

6. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grubb in view of either Riley (U. S. Pat. No. 3,431,145) or Hopkins (U. S. Pat. No. 2,245,195).

Claim 25 defines over Grubb only in the recitation of the gas being pulsed. Riley (col. 5, lines 33-37) and Hopkins (page 2, lines 65-70, right column) each disclose the pulsed

Art Unit: 1746

gas. It therefore would have been obvious to one having ordinary skill in the art to modify the gas in Grubb, to be pulsed as taught by either Riley or Hopkins, for the purpose of increasing the turbulent effect of the cleaning medium to provide a higher degree of cleanliness.

7. Claims 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grubb in view of Yam et al. (U. S. Pat. No. 5,512,071), De Faber et al. (U. S. Pat. No. 1,948,568), English et al. (U. S. Pat. No. 4,538,545), Makela et al. (U. S. Pat. No. 5,536,368), Karlson (U. S. Pat. No. 5,868,999), Courts (U. S. Pat. No. 2,699,403), Hei et al. (U. S. Pat. No. 5,567,444) or Gurstein et al. (U. S. Pat. No. 5,611,868).

Claims 26-31 define over Grubb only in the recitation of the specific surfactants/cleaning solutions/additives. The patents to Yam, de Faber, English, Makela, Karlson, Courts and Hei are cited disclosing either of the various surfactants/solution as claimed. It therefore would have been obvious to one having ordinary skill in the art to modify the device of Grubb, to employ either of the various surfactants/solutions as taught by Yam, de Faber, English, Makela, Karlson, Courts and Hei, since Grubb discloses that the chemical solution may be "of any nature dependent upon the particular cleaning or cleaning task to be performed" (col. 2, lines 52-54).

8. Claims 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grubb in view of either Szucs (U. S. Pat. No. 4,716,690) or Garcia (U. S. Pat. No. 5,674,323).

Claim 32 defines over Grubb only in the recitation of the solution including solid particles. Szucs and Garcia each disclose a two phase flow cleaning solution where

Art Unit: 1746

there is included in the solution, solid particles. It therefore would have been obvious to one having ordinary skill in the art to modify the device of Grubb, to include particles in the solution as taught by either Szucs or Garcia, for the purpose of thoroughly scrubbing the object being cleaned to provide a higher degree of cleanliness. Re claims 33 and 34, Garcia discloses the particles being both insoluble and soluble in water (col. 11, lines 51-65).

9. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grubb in view of Walker et al. (U. S. Pat. No. 3,194,438).

Claim 36 defines over the applied prior art only in the recitation a source of water for flushing the object. Walker is cited disclosing the water as instantly claimed (see col. 1, lines 44). It therefore would have been obvious to one having ordinary skill in the art to modify the device of Grubb, to include a water source for final flushing as taught by Walker, for the purpose of removing any residual solution that usually remains on the object being cleaned. It is old and well known in the art to wash with a cleaning solution then to remove the same with a water flush.

10. Applicant's arguments with respect to claim 18 have been considered but are moot in view of the new ground(s) of rejection.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In Brady, Caimi et al., Matsumoto et al., Babish et al., Sakamoto, Kormey et al., Nickell et al., note the two phase flow cleaning solution

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to FRANKIE L. STINSON whose telephone number is (571) 272-1308. The examiner can normally be reached on M-F from 5:30 am to 2:00 pm and some Saturdays from approximately 5:30 am to 11:30 am.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr, can be reached on (571) 272-1700. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

Art Unit: 1746

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Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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FRANKIE L. STINSON
Primary Examiner
GROUP ART UNIT 1746